UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,990	03/29/2001	Isao Minematsu	57454-060	3710

7590 06/28/2004	**EXAMINER**
McDERMOTT, WILL & EMERY	PAN, DANIEL H
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Washington, DC 20005-3096	

ART UNIT	PAPER NUMBER
2183	

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)	
Office Action Summary	09/819,990	MINEMATSU, ISAO	
	Examiner	Art Unit	
	Daniel Pan	2183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _08 April 2004_.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-14_ is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-11 and 13_ is/are rejected.

7) ☒ Claim(s) _12 and 14_ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _29 March 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☒ All b)☐ Some * c)☐ None of:

  1. ☒ Certified copies of the priority documents have been received.

  2. ☐ Certified copies of the priority documents have been received in Application No. _____.

  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1.   Claims 1-14 are presented for examination.

2.   Upon further review and consideration, and based on the applicant's argument, it is found that Kudo did not teach the transfer of data between registers in correspondence to the single instruction having a single opcode. Kudo taught data transfer from a special register to a general purpose register (e.g. see col.26, lines 33-35). However, the instruction for commanding the transfer from the special register to the general purpose register was not clear. And , therefore, it is for this reason, the rejections of claims 1-10 under Kudo have now been withdrawn. A further search was conducted to find the feature of the data transfer between the registers in correspondence to a single instruction. The following is a non-final action based on the new ground of rejection to allow applicant a reasonable time to respond. This Office action supersedes the previous Office action on 01/08/04. The IDS by applicant on March 29, 2001 has been already considered.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kudo et al. (6,560,692) in view of Geldman et al. (5,524,268)

4.   As to claim 1, Kudo disclosed at least :

a) program control unit for fetching instructions (fetching of the instruction no explicitly

shown)

b)instruction decoder for decoding the instructions (col.11, lines 40-61 for the decoding

of the specific stack pointer instructions, see also col.23, lines 22-23, col.26, lines 60-

64);

c) address operation unit on the basis of the decoding result (col.26, lines 36-56 for the

address selection);

d) data operating unit executed the transfer between registers and a memory [stack] in

response to a single instruction code (see the data transfer between the register and the

stack memory by the push instruction in col.15, lines 20-28, col.25, lines 29-67, see also

the transfer of the special register to general purpose register in col.26, lines 30-35, see

also all other specific stack pointer instructions in col.14, lines 44-53).

5.   Kudo did not explicitly show the fetching of the instructions as claimed. Instead ,

it showed the execution of the instructions (see e.g. the execution routine in figs21,22).

However, it should be clear that any instruction should be fetched before gets

executed; the execution unit has to receive instruction first before executing the

instruction. Therefore, for this reason, the fetching of the instructions is being implicitly

taught by Kudo (see also the transfer of instructions from ROM in col.18, lines 29-31).

6.   Kudo did not specifically show the data transfer between the registers in

correspondence to single instruction as claimed . However, the instruction for

commanding the transfer from the special register to the general purpose register was

not clear. Nevertheless, Gelman disclosed a system including a single instruction having single opcode MV8 for transferring data between registers (e.g. see col.8, lines 16-19),. It would have been obvious to one of or diary skill in the art to use Gelman in Kudo for including the data transfer between eh registers in correspondence to a single instruction as claimed because the use of Gelman could provide Kudo the processing capability to adapt to specific data transfer operations from different sources, such as between the registers in addition to the data transfer from the memory, thereby increasing the processing structure of the memory access system in Kudo, and it could be readily achieved by predefine the Gelman's instruction format into the configuration file of Kudo with modified control parameters, such as the instruction width, type, for data transfer between the registers, and recognizable by Kudo, and because Kudo did teach the data transfer between registers , though the instruction commanding the transfer was not clearly set, one of ordinary skill in the art should be able to recognize the need of using a single instruction for commanding the data transfer between registers in Kudo in order to enhance the programming control of the data allocation, and therefore, it is for the above reasons , provided a motivation.

7.   As to claim 2, Kudo also disclosed transfer of the data from a first register [general purpose] to a memory [stack] and transfer the data from a second register [special register] to the first register [general purpose register] (e.g. see transfer of data by push col.26, lines 30-35).

8.   As to claims 3, 7, Kudo also decremented and incremented the pointer (e.g. see the update of the SP in col.13, lines 9-43).

9.   As to claims 4,8, first register of Kudo was a working register (general purpose).

10.   As to claims 5,9, Kudo's second register was a control register (special register).

11.   As to claim 6, Kudo also taught transfer of the data in first register to second and the transfer in memory to the first (see the transfer of data by pop instruction in col.26,lines 30-35).

12.   As to claim 10, Kudo also kept the value of stack pointer unchanged for a single push (e.g. see the latched stack pointer value in latch (Add_LT) 32 at the end of the push col.27, lines 10-30).

13.   Claims 11-14 have not been amended. Claims 11, 13 are rejected. Claims 12, 14 are objected as set forth below. Kudo et al. (6,560,692) is used for the following rejection of claims 11,13 with discussions in response to applicant argument. Kudo et al was cited in the previous Office action on 01/08/04, therefore, copy is not provided herein.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14.   Claims 11 ,13 are rejected under 35 U.S.C. 102(e) as being anticipated by

Kudo et al. (6,560,692) .

15.   As to claims 11,13,   Kudo also included at least :

a) a code for reading a code from a source program (e.g. the see source program in

fig.4, see also the transfer of the instructions from ROM in col.18, lines 29-36);

b)storage unit for storing information specifying a plurality of registers (see the stack

region in fig.4);

c) a first code generating unit for storing information for specifying registers and

generating a code to push data when the code was a first macro instruction (e.g. see

the assembler for creating the instruction codes push for transferring the data from

memory to registers in col.17, lines 5-16, see also the push instruction which specified

the registers R in fig.4);

d) a second code generating unit for storing information for specifying registers and

generating a code to pop data when the code was a second macro instruction (e.g.

see the assembler for creating the instruction codes pop for transferring the data from

registers to memory in col.17, lines 5-16, see also the pop instruction which specified

the registers R in fig.4).

16.   As to the argument by applicant regarding the rejection of claims 11, applicant

argued that Kudo did not disclose storing information for specifying a plurality of

registers in a code and referring this information for generating g a code to push or pop

data .

17.   in response to the applicant argument above, applicant is arguing something

already taught by Kudo. Kudo did disclose storing information for specifying a plurality

of registers (see the operand specifying R) in a code and referring this information for

generating g a code (see pushn and popn)   to push or pop data .

18.   As to the argument by applicant regarding claim 13, applicant argued that Kudo

did not specifically show the storage of information specifying of registers included in

the code and generating a code to push data stored in the registers when n the cod is a

first macro instruction, and referring to the stored information for specifying the plurality

of registers and generating a code to pop data to store in the plurality of registers

when the code is a second macro instruction.

19.   As to the argument above, Kudo disclosed information specifying of registers

{R0] [R15] included in the code (see col.26, lines 16-29 for indicated register number)

and generating a code [pushn] to push data stored in the registers when the code is a

first macro instruction [pushn] (seethe macro instructions, such as call, ret, pushn, popn

in col.14, lines 44-58) , and referring to the stored information for specifying the plurality

of registers [R0]-[R15] and generating a code [popn] to pop data to store in the

plurality of registers when the code is a second macro instruction [popn].

20.   Claims 12,14 are objected to as being dependent upon a rejected base claim,

but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims. None of the prior art of record further

teaches the generation of the code to push data other than a register used as medium

for data transfer between the registers and a memory among the registers included in

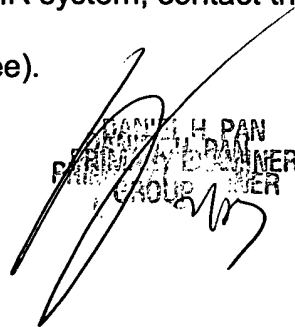the read code which is a first macro instruction.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dan Pan whose telephone number is 703 305 9696.

The examiner can normally be reached on M-F from 8:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chan, can be reached on 703 305 9712. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

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21 Century Strategic Plan

DAN H. PAN
PRIMARY EXAMINER